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Maintenance Manual ([illustrations](#))

Regular cleaning of your system's filter and diffuser is important to keep the system operating at peak efficiency.

WHEN TO CLEAN FILTER

There appears to be a natural tendency to clean the filter more often than required. Actually, a slightly dirty filter will filter the water better than a new filter. The filter element will also filter out finer particulates after it has been used for awhile. This is referred to as "seasoning" the filter.

The time between filter cleaning will vary according to the severity and type of water problems, the condition of your holding tank prior to the system installation, and the daily amount of water usage.

To clean the filter, it is only necessary to hose the collected debris off the filter pleats - it is not necessary to scrub the pleat material or use any cleaning agents. The pleats will stain over time and will not become white when cleaned. This is normal and will not affect the function of the filter.

Use the following method to determine the cleaning interval for your filter:

1. After initial start up, perform the first filter cleaning in 10 to 14 days. If the filter is not "loaded" with particulates, clean again in 30 days. A "loaded" filter is defined as having more than 1/2 of the filter pleat depth filled with particulates. If the filter is not loaded at the 30 day cleaning, you can then set your cleaning schedule to every 60 days. If not loaded in 60 days you can extend the cleaning schedule to every 90 days. In no case should the filter cleaning interval exceed 90 days.

2. If the filters are loaded at the initial 10 to 14 day cleaning, continue cleaning at 2 week intervals until the filters are no longer loaded. This bi-weekly cleaning will be required if your tank has a lot of "growth" or deposits on the tank walls. The water treatment system will remove this growth off the tank walls and your tank will reach a point of stabilization. Once your tank has stabilized, extend your cleaning interval to 30 days. If the filters are not loaded at 30 days, extend the cleaning interval to 60 or 90 days as appropriate. In no case should the filter cleaning interval exceed 90 days.

FILTER CLEANING

1. Leave the ozone generator ON.

2. Proceed to the tank manhole. Slowly pull the [filter module](#) to the surface of the tank water, such that the top of the lift pipe is just below the surface of the water. Remove the Norprene hose from the inside of the 3/16 hose barb (inside the manhole) to stop the ozone flow to the diffuser. Now pull the entire filter module vertically through the manhole in one smooth motion and place on most level area of tank. Do not pull up the filter so fast that turbulence will be created as this will knock excess debris off of the filter.

As you pull up on the filter, the lower flapper valve will open and release the water trapped inside the filter. This creates a slight vacuum inside the filter, thus helping to hold the debris on the pleats in place.

Note - some debris will fall off the filter, but since this is coagulated debris, it will fall rapidly to the bottom of the tank.

3. Hose down the filter with a stiff water spray, washing from top to bottom using the cleaning wand provided. Remove the

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quick disconnects to gain access to the inside of the filter and hose from the inside out (reverse flow) for more thorough cleaning. Check to make sure that there is no debris in the flapper valve that would prevent sealing.

HELPFUL HINTS

You may wish to purchase an extra filter element. You can then change the filter element on top of tank, clean the dirty filter on the ground and store for next change. Once used, keep the filter element wet.

DIFFUSER CLEANING

The diffuser will become restricted over time due to the ozone precipitating out iron, manganese, calcium, etc., and plating the surface of the diffuser with these contaminants. A plugged diffuser will reduce both the ozone flow and therefore the water flow through the filter, thus impairing the ability of the system to maintain your water quality. A completely plugged diffuser can cause damage to the ozone generator.

During the filter cleaning, remove the handle assembly to gain access to the diffuser. Immerse diffuser with Norprene hose attached in a gallon jug of swimming pool muriatic acid for about 30 seconds.

Make sure the ozone hose has been disconnected from the manhole barb fitting as covered under filter cleaning, so no ozone gas is flowing through the diffuser. If ozone gas is flowing through the diffuser, it will keep the acid from cleaning the diffuser pores and create excess acid fumes.

CAUTION: MURIATIC ACID NEEDS TO BE HANDLED CAREFULLY. DO NOT BREATHE THE MURIATIC ACID FUMES.

Remove the diffuser from the muriatic acid and rinse completely with water. It should become sparkling white. Repeat cleaning procedure if necessary.

Replace the diffuser/handle assembly and tighten the quick disconnect. Slowly lower the filter module into the tank and reconnect the Norprene hose to the 3/16 inch barb fitting.

Check for a rising pattern of bubbles in the tank and replace the manhole cover.

HIGH HYDROGEN SULFIDE WATER

(Rotten egg odor)

In water systems with very high hydrogen sulfide, the diffuser may become plugged with sulfur which is not soluble in muriatic acid. If this is the case, first clean the diffuser with muriatic acid as described above. Then rinse the diffuser thoroughly and soak for at least 15 minutes in concentrated chlorine solution and rinse.

ANNUAL MAINTENANCE

Once a year, the ozone hose from the generator to the mixer, and the ozone hose from the mixer to the filter module should be disconnected and condensation drained from the hoses.

BI-ANNUAL MAINTENANCE

The ozone generator UV light assembly should be replaced every 18 to 24 months to maintain peak ozone output. The UV lamp ozone producing rays will decrease over time. This is due to the lamp glass "solarizing" and becoming more opaque to the ozone producing wavelength. Please note that the light you see coming from the UV view port on the front of the generator can be visible UV light. The wavelength of light that produces ozone is not visible to the human eye.

The ozone output of your system will reduce to about 80% of new after 12 months, 50 - 65% of new at 18 months, and 25 - 40% of new at 2 years.

Ozone lamp replacement is especially critical when bacteria control is needed. In this case we recommend annual UV replacement.

Trouble-shooting

Basic trouble-shooting of the system is quite simple. A decreased bubble pattern in the tank means there is less ozone flow and therefore less water flow through the filter, with the result being reduced water quality.

Reduced or no ozone bubble pattern in tank:

1. Diffuser needs cleaning.
2. Check for ozone hose leaks with soapy water.
3. Bad air pump - replace air pump.
4. Leaking UV light assembly - replace.
5. Crimped ozone hose.
6. Leaking 6 psi check valve on mixer assembly.

The 6 psi red check valve is the one between the 3/16 inch barb tee and the venturi eductor (see page 3). If this valve leaks, some of the ozone gas will continuously bubble into the water feed pipe to the tank. To determine if the valve is leaking, place your ear against the venturi eductor and listen for a "gurgling" sound. If the check valve is leaking, replace with new valve.

Water conditions were good, but then became worse:

1. Filter needs cleaning.
2. Diffuser needs cleaning.
3. Reduced or no ozone bubbles in tank - see above.
4. UV light assembly is more than 24 months old.
5. Large water usage such as filling swimming pool or irrigation.
6. Check the filter module flapper valve, located on the bottom of the filter module, for foreign objects (leaf, twig, etc.) that may be keeping the flapper valve from sealing.

Helpful Information

Once your holding tank has stabilized, you will start enjoying good water. If you have been living with poor water in your home for some time, it is very likely that your plumbing has accumulated deposits of the contaminants that are now being removed from your water supply. These deposits will be removed from your plumbing over time:

Iron: As your pipes are cleaned out, you may notice "spurts" of iron colored water when your taps are first opened. This is especially true for taps that are not used regularly. Cleaning out your toilet tanks will remove any accumulated iron and help eliminate continued toilet staining.

Odor/Taste: These problems are similar to iron in that you may notice "spurts" of bad taste or odor when a water tap is first opened.

Calcium/Hardness: Your new Triple O system, through the use of ozone/polarization technology, will make your water appear softer. Your water will suds and act like soft water without any sodium being added. You may still notice some hard water deposits on your fixtures, but these deposits can be more readily removed because they will not bond strongly. For extreme hard water, you may wish to treat your water with an available water softener.

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